

Information Bulletin

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Title: Adequate Pre-Use Inspection Can Help Avoid Crane Mishaps

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Lessons Learned Summary: Lack of a thorough pre-use inspection for a mobile crane led to the load wire being captured on the load block during the lift. A thorough pre-use inspection should include verification that the wire rope is in the proper orientation prior to the lift.

Care must be taken to position the boom over the load block when lifting the load block off the ground to ensure the wire rope does not have excess slack and is in the correct position. Improper lifting of the block off the ground can result in the wire rope being in the wrong orientation.

Discussion of Activities: On March 29, 2006, during the offloading an Interim Storage Cask (ISC), a noise was heard and it was noticed that the wire rope was not transitioning smoothly. Work was immediately stopped and the problem was found to be that the wire rope was captured on the Becket of the Manitowoc 4100 crane.

Analysis: This problem can occur during the evolution of placing the load block on the ground and developing slack cable, and then raising the boom and block with the load wire caught on the Becket. Improper positioning of the boom while lifting the block off the ground can cause slack in the wire rope enabling it to catch on the Becket. A pre-use inspection had been completed but with no problems found.

Recommendations:

- When performing a pre-use inspection for a mobile crane, verify that the wire rope is in the proper orientation. If unable to see the lines due to the height of the boom point, the boom should be lowered to allow for an inspection of the wire rope. Being diligent during inspections will assure that problems with the wire rope can be avoided.
- When raising the block from a slack position, the crane operator and iron worker need to raise the block by transitioning the boom over the load block as it is raised. This will limit the amount of slack wire and position the load block directly under the boom.
- Inspecting the point and its components after the block has been placed on the ground to verify proper wire rope orientation is a must.



Cost Savings/Avoidance: Not determined

Work Function: Hoisting and Rigging

Hazards: Other

Keywords: Crane and Rigging, mobile crane, wire rope, lift,

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